

QUEEN CREEK AT CAP FCD GAGE# 6723

STATION DESCRIPTION

LOCATION – The gage site is located on Queen Creek at upstream side of the Sonokai Dike in Pinal County. Gage is accessed by travelling from US 60 south on Ironwood Road (Vineyard Road) to Ocotillo Road. Turn east to Schenpf Road and go south to Sky Line Road, turning east until the dam is reached. Turn left onto the dam and travel an additional 3 miles to the gage. Latitude N 33° 13' 55.7", Longitude W 111° 30' 11.1". Located in NE1/4 NE1/4 Section 26, T2S, R8E of the Magma 7.5 minute USGS quadrangle.

ESTABLISHMENT – The gage was installed on January 14, 1999.

DRAINAGE AREA – 256 square miles

GAGE – The gage is a pressure transducer type instrument. The PT is at gage height 0.20 feet, levels of September 27, 2004 and October 14, 2004.

There is no staff gage at this location.

There is no crest-stage gage at this location.

ZERO GAGE HEIGHT – Zero is the low spot at the upstream side of the culverts passing under the dike.

HISTORY – Gage installed on January 14, 1999. PT gage reconfigured on May 24, 2004.

REFERENCE MARKS –

RM-QCCAP - is a CAP brass cap located on the downstream slope of the dike, just to the left of the culvert. Elevation 6.34 feet gage height, levels of September 27, 2004.

R.P.1 - Reference point established as the ground at the PT, elevation 0.00 feet gage height, levels of October 21, 1999.

CHANNEL AND CONTROL – Queen Creek is passing under the Sonokai Dike at this gage location. The control is the four culverts passing under the dike. The culverts include 4, 72-inch circular concrete pipes. Culvert length is 80 feet. Top of dike at culverts is 17.8 feet.

RATING – Rating #1 was developed from surveyed culvert geometry and peak discharge information obtained from the CAWCD.

DISCHARGE MEASUREMENTS – Discharge measurements can be made at shallow depths on the downstream side of the structure in the channelized area upstream of the culvert crossings over the CAP canal.

POINT OF ZERO FLOW: The PZF is in the right-most culvert at elevation 0.00 feet gage height, levels of October 21, 1999.

FLOODS – The peak event of 1,043 cfs and 10.15 feet gage height occurred on February 12, 2005. A runoff event occurred January 21, 2010 of 926 cfs and 8.77 feet gage height.

REGULATION – The dam regulates Queen Creek just before it passes over the CAP canal. The design discharge for Queen Creek into the structure is 17,000 cfs. The four culvert capacity is 1,113 cfs, per design specifications.

DIVERSIONS – A small diversion of water occurs to Queen Valley at the outlet works for Whitlow Ranch Dam.

ACCURACY – Fair

JUSTIFICATION – Monitor flows in Queen Creek for potential dam breach and flood warning downstream.

UPDATE – July 20, 2011
DE Gardner